

## **Ultra-Low Temperature Freezers - Market Share Analysis, Industry Trends & Statistics, Growth Forecasts (2025 - 2030)**

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### **Report description:**

The Ultra-Low Temperature Freezers Market is expected to register a CAGR of 6.52% during the forecast period.

The impact of COVID-19 on the market's growth was substantial as ultra-low temperature freezers played a crucial role in the storage and distribution of large amounts of COVID-19 vaccines that required ultra-cold conditions. For instance, according to the article published in the Journal of Human Vaccines and Therapeutics in February 2022, according to the Food and Drug Administration (FDA) guidelines, the Pfizer-BioNTech mRNA COVID-19 vaccine BNT162b2 required to be stored in ultra-low temperature-freezers -80C to -60C for up to six months after receiving. Thus, the guidelines suggesting the storage of COVID-19 vaccines in ultra-low temperature freezers significantly impacted the market growth. Thus, COVID-19 has impacted the usage of ultra-low temperature freezers during the initial pandemic. However, as the pandemic has currently subsided, the adoption of ultra-low temperature freezers is taking place at pre-pandemic levels. Thus, the studied market is expected to have pre-pandemic levels of growth during the forecast period of the study.

Factors that are responsible for the market growth includes rising applications in bio-banks, drug discovery and life-sciences research, and technological advancement in ultra-low temperature freezers.

The increased usage of ultra-low temperature freezers to store biological samples in bio-banks is a major factor propelling the market's growth. For instance, according to an article published by the Journal of Rapid and Transparent Publishing in September 2022, the Integrated Biorepository of H3Africa Uganda (IBRH3AU) at Makerere University in Uganda is one of the first biobanks of its kind in Eastern Africa which has freezer firm that is equipped with 20 ultra-low temperature (ULT) freezers. The source also stated that the biobank's ultra-low temperature freezers were capable of storage from -70C to -80C and had a capacity of 50,400 2 ml vials each which allowed them to store biological samples properly. Thus, the adoption of ultra-low temperature freezers in

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biobanks is expected to increase market growth.

Additionally, in June 2021, ThermoFisher Scientific Inc. launched the ThermoScientific TSX Series Ultra-Low Temperature (ULT) Freezers. These freezers included additional functionality to provide research, pharmaceutical manufacturing, clinical, biorepository, and industrial laboratories with safeguards to deliver environmentally sustainable protection of materials, such as vaccines, cell culture media, biologics, and reagents. Similarly, In October 2022, ThermoFisher Scientific Inc. also announced the launch of Thermo Scientific TDE Series -80C Chest Freeze in the market. Thus, the launch of various technologically advanced ultra-low temperature freezers by key market players is also expected to boost the market, as it would increase their usage.

Thus, owing to the abovementioned factors such as the increasing adoption of ultra-low temperature freezers in biobanks, and the rising product launches by major market players, the market is expected to show growth over the forecast period. However, high costs associated with ultra-low temperature freezers and stringent regulatory issues regarding ultra-low temperature freezers may hinder the growth of the market.

#### Ultra Low Temperature Freezer Market Trends

##### Upright ULT Freezers Segment is Expected to Hold a Significant Market Share Over the Forecast Period

The upright ULT freezer enables quick cooling after opening, simple access, and individually customizable inner compartments for regular usage. However, less used items can be stored in a chest ULT freezer safely for an extended period of time that, allows the usage of the chest ULT for specific purposes. Upright ultra-low temperature freezers (ULT freezers) typically have a temperature range of -40C to -86C and are used to store drugs, enzymes, chemicals, viruses, bacteria, cell preparations, and tissue samples. Such advantages offered by upright ULTs are anticipated to boost the adoption of these freezers in the near future.

Additionally, an increasing number of biobanks and technological advancements related to upright ULT freezers are expected to enhance segment growth. For instance, in March 2023, South Africa launched a central biobank network, Biodiversity Biobanks South Africa (BBSA). This network aims to bring together 7 institutions and 22 different biobanks previously scattered across South Africa to conserve and manage biodiversity samples. Similarly, in December 2022, Saudi Arabia launched National Biobank to enhance the public health system. This is expected to strengthen national health security, increase the effectiveness of control programs and control of communicable and non-communicable diseases, as well as effectively contribute to the promotion of Saudi Arabia's research, development, and innovation agenda.

Moreover, the segment's growth is driven by a surge in research and development activities for pharmaceutical drugs and vaccines. For instance, according to the data updated by ClinicalTrials.Gov on 30th May 2023, there were an estimated 1,946 active clinical trials for vaccines. Several vaccines under clinical trial are expected to be launched over the coming years that may require ultra-cold conditions for storage and transportation of raw materials.

Thus, all the above factors such as the increasing number of biobanks, technological advancements in upright ultra-low temperature freezers, and the rising clinical trials for drugs are expected to increase demand for upright ULT freezers, thereby boosting the segment's growth.

##### North America is Expected to Hold a Significant Share in the Market Over the Forecast Period

North America is expected to hold a significant market share in the ultra-low temperature freezers market due to the presence of several biobanks, pharmaceuticals, and biotechnology companies within the region.

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The growing research and development activities on cell-based therapies and vaccines and government support are expected to boost the market growth. For instance, in March 2023, Jubilant HollisterStier received a USD 23.8 million Strategic Innovation Fund from the government of Canada's commitment to boost its capacity for a variety of vaccines, including mRNA, as well as its yearly fill and finish capacity. Thus, with significant vaccines development activities in the country, the demand for ultra-low temperature freezers is expected to increase as ultra-low temperatures are often required in the initial stages of vaccine development.

Furthermore, the high adoption of technologically advanced ultra-low temperature freezers and product launches by major market players are expected to propel the growth of the overall regional market. For instance, in October 2022, ThermoFisher Scientific announced the addition of the ThermoScientific TDE Series -80C Chest Freezer to their ultra-low temperature (ULT) green line.

The rising collaboration between the market players for the supply of ULTF is expected to put forward the market over the forecast period. For instance, in February 2021, PHC Corporation of North America (PHCNA) and Follett Products, LLC (Follett), a division of The Middleby Corporation, announced the formation of a partnership to market and sell the PHC line of ultra-low temperature (ULT) freezers pharmaceutical grade refrigerators, and biomedical freezers to Follett's healthcare customers.

Thus, all the factors mentioned above such as the increasing research and development activities for vaccine developments, and the rising developments by market players are expected to increase demand for ultra-low temperature freezers and boost market growth over the forecast period.

#### Ultra Low Temperature Freezer Industry Overview

The market studied is moderately competitive, and several companies are operating in this market. Some of the major players operating in the market include Thermo Fisher Scientific, Inc., PHC Holdings Corporation, Haier Smart Home Co., Ltd (Haier Biomedical), Eppendorf SE, and BioLife Solutions, Inc., among others.

#### Additional Benefits:

- <ul> <li> The market estimate (ME) sheet in Excel format </li>
- <li> 3 months of analyst support </li> </ul>

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